SUBJECT AND AUTHOR INDEX

Accipiter cooperi		190
velox velox		190
Acrocrinidae Wachsmuth and Springer		217
Acrocrinus brentwoodensis Moore and Plummer	222.	314
pirum Moore and Plummer		
Yandell		
Actitis macularia		
Adams, E. Q., and Forsythe, W. E., Tungsten filament incandescent la		
Aesiocrinus Miller and Gurley		
SD		
Agassizocrinus caliculus Moore and Plummer		
magnus Moore and Plummer		
Owen and Shumard		
Agelaius phoeniceus phoeniceus		
Aimophila aestivalis bachmani		
Ammodramus savannarum australis		
Anas platyrhynchos platyrhynchos		
rubripes tristes		
Anthus spinoletta rubescens		
Antrostomus vociferus vociferus		193
Archilochus colubris		193
Ardea herodias herodias		188
Arkansas, Upper Carboniferous crinoids from Morrow subseries of Arkansas,	kansas,	
Oklahoma, and Texas		314
Baeolophus bicolor		196
Baldpate		
Bartramia longicauda		
Birds, Annotated check-list of birds recorded at Granville, Licking C		
Ohio		187
Bittern, American		
Blackbird, Eastern Red-winged		
Rusty		
Bluebird, Eastern		
Bobolink		
Bob-white		
Bombycilla cedrorum		
Botauras lentiginosus		
Branta canadensis canadensis		
Bubo virginianus virginianus	1	193
Bufflehead		190

Bunting, Indigo	00
Buteo borealis borealis	
lineatus lineatus	-
platypterus platypterus	
Butorides virescens virescens	188
Camerata Wachsmuth and Springer	217
Sanvasback	
Capella delicata	
Cardinal, Eastern	
Carpodacus purpureus purpureus	202
Catbird	
Cathartes aura septentrionalis	
Centurus carolinus	
Certhia familiaris americana	
Chaetura pelagica	
Chamberlin, Willis A., History of Theta Chapter of Ohio Phi Beta Kappa,	
1911–1936	1
Charadrius semipalmatus	191
Charitonetta albeola	190
Chat, Yellow-breasted	
Chickadee, Carolina	
Chlidonias nigra surinamensis	
Chordeiles minor minor	193
Chronograph, used for radio acoustic ranging	
Cibolocrinus regularis Moore and Plummer	314
tumidus Moore and Plummer232,	314
Weller	
Circus hudsonius	
Clangula hyemalis	
Coccyzus americanus americanus	
erythrophthalmus	193
Colaptes aurates luteus	
Colinus virginianus virginianus	
College, Science and the college	
Colymbus auritus	188
Compsothlypis americana pusilla	199
Coot, American	
Corthylio calendula calendula	
Corvus brachyrhynchos brachyrhynchos	195
Cowbird	
Creeper, Brown	
Crinoids, Upper Carboniferous, from Morrow subseries of Arkansas, Okla-	
homa, and Texas	314
Cromyocrinus grandis Mather	255
Trautschold	
Croneis, Carey, Science and the college	
Crow, Eastern	

INDEX	327

Cryptoglaux acadica acadica	
Cuckoo, Black-billed	
Yellow-billed	
Cyanocitta cristata cristata	195
Delocrinus dubius Mather	297
matheri Moore and Plummer	
Miller and Gurley	,
? pendens Moore and Plummer	
? sp	
Dendroica aestiva aestiva	
caerulescens caerulescens	
castanea	
cerulea	
coronata	
fusca	
magnolia	
palmarum palmarum	
pensylvanica	
striata	
tigrina	
virens virens	199
Denison Scientific Association, Report of Permanent Secretary for year	
1936–1937	
Scientific Association, Semi-centennial celebration of founding of	
the Denison Scientific Association	320
University endowment	145
Diphuicrinus croneisi Moore and Plummer	, 314
Moore and Plummer	307
Dolichonyx oryzivorus	201
Dorsey, Herbert Grove, Application of physics to modern hydrographic	
surveying	164
Dove, Eastern Mourning	192
Dryobates pubescens medianus	194
villosus villosus	
Duck, Common Black	
Lesser Scaup	
Ring-necked	
Ruddy	
Dumetella carolinensis	
Dumeveria Caronnensis	150
Ebaugh, W. C., Aptitude and attainment in chemistry	010
EDBURH, W. C., Applitude and attainment in chemistry	
Empidonax flaviventris	194
Empidonax flaviventris minimus	194 194
Empidonax flaviventris	194 194 194
Empidonax flaviventris	194 194 194 194
Empidonax flaviventris	194 194 194 194 145

.

Erismatura jamaicensis rubida		190
Ethelocrinus costalis Moore and Plummer	261,	314
hispidus Moore and Plummer	263,	314
Kirk		255
oklahomensis Moore and Plummer	256,	314
papulosus Moore and Plummer:	259,	314
subsinuatus Moore and Plummer	264,	314
Euphagus carolinus		
Falco sparverius sparverius		191
Fathometer		
Finch, Eastern Purple		
Fistulata Wachsmuth and Springer.		
Flexibilia Zittel		
Flicker, Northern		
Flycatcher, Acadian		
Alder		
Least		
Northern Crested		
Olive-sided		
Yellow-bellied		194
Forsythe, W. E., and Adams, E. Q., Tungsten filament incandescent lamp.		
Fulica americana americana		191
0 41 1 4 1 1 1 1 1 1 1 1		000
Geothlypis trichas brachidactyla		
Glaucionetta clangula americana		
Gnatcatcher, Blue-gray		
Golden-eye, American		
Goldfinch, Eastern		
Goose, Canada		
Grackle, Bronzed		201
Granville, Annotated check-list of birds recorded at Granville, Lick	ing	
County, Ohio		
Grebe, Horned		188
Pied-billed		
Greenshields, Bruce D., Reaction-time as factor in driving	:	317
Grosbeak, Eastern Evening	:	201
Rose-breasted	!	201
Gull, Herring		192
Ring-billed		192
Hawk, Broad-winged		100
Cooper's		190 190
Eastern Red-tailed		
Eastern Sparrow		
Marsh		
Northern Red-shouldered		190
Sharp-shinned		100

INDEX	329

Hedymeles ludovicianus	. 201
Helmitheros vermivorus	. 198
Heron, Black-crowned Night	
Eastern Green	
Great Blue	
Herrick, C. Judson, Our endowment	
Hesperiphona vespertina vespertina	
Hirundo erythrogaster	. 195
Howe, R. H., From wireless to radio	
Hubbard, George D., Geology and geography of Gaspé	
Hummingbird, Ruby-throated	
Hydreionocrinus	
de Koninck	
Hydriocrinus? rosei Moore and Plummer	, 314
Trautschold	
Hydrophone, used for radio acoustic ranging	. 186
Hylocichla fuscescens fuscescens	
guttata faxoni	197
minima aliclae	
mustelina	
ustulata swainsoni	
Icteria virens virens	200
Icterus galbula	201
spurius	
Inadunata Wachsmuth and Springer	236
Iridoprocne bicolor	
Jay, Blue	195
Junco hyemalis hyemalis	
Slate-colored	
Killdeer	191
Kingbird	
Kingfisher, Eastern Belted	
Kinglet, Eastern Ruby-crowned	
Golden-crowned	
Klepfer, Ward M., and Taylor, William J., Annotated check-list of birds	
recorded at Granville, Licking County, Ohio	187
Krypton, as getter of lamp	
Lamps, automobile lamps	101
bi-post lamp construction	106
calculation of modular time.	
characteristic equations	
characteristics and voltage	
coiled coil filaments	
CX lamps	
	00

Lamps, dissipation of energy by lamp filament	
early incandescent lamps	
economical life for incandescent lamps	
Edison's contribution	
effective voltage change due to end losses	89
end losses	85
eye and lamp efficiency	
factors affecting light output	122
flashlight lamps	102
flickering of lamps	123
floodlighting lamps	96
gas-filled lamps	81
gas losses	83
"Grain-o'-wheat" surgical lamp	102
heat content of filament	120
inside frosting of lamps	126
Krypton as getter of lamp	83
lamp efficiency and lamp voltage	124
lamp life and filament diameter	92
lamps for general lighting	92
lamps for special services	93
large lamps	
lumiline lamp.	
methods of controlling bulb blackening	84
miniature lamps	98
non-sag wire	91
photoflood lamps	
pre-focused lamps	
projection lamps	
spectral distribution and filament temperature	
spotlighting lamps.	96
street lighting	95
tungsten filament incandescent lamp	
Lanius ludovicianus migrans	
Lark, Northern Horned	
Prairie Horned	
Larus argentatus smithsonianus	
delawarensis	
Lecanocrinidae Springer	
Livingston, Walter J., German study of body form and athletic achievement.	
Lophodytes cucullatus	190
Mallard, Common	189
	189
Martin, Purple	195
Meadowlark, Eastern	
Megaceryle alcyon alcyon	
Melanerpes erythrocephalus	

INDEX	331
111222	-

Melospiza georgiana	
lincolni lincolni	
melodia beata	
Merganser, American	
Hooded	
Red-breasted	
Mergus merganser americanus	
serrator	
Miller, Freeman D., Astronomy in moving pictures	
Mimus polyglottos polyglottos	
Mniotilta varia	
Mockingbird	
Molothrus ater ater	201
Moore, Raymond C., and Plummer, Frederick B., Upper Car	
crinoids from Morrow subseries of Arkansas, Oklahoma, and To	exas209-314
Morgan, G. D., Animal parasites and human disease	
Morrow subseries, Upper Carboniferous crinoids from Morrow su	bseries of
Arkansas, Oklahoma, and Texas	209-314
Morrowcrinus fosteri Moore and Plummer	245, 314
Moore and Plummer	242
Myiarchus crinitus boreus	194
Myiochanes virens	
Nannus hiemalis hiemalis	
Nettion carolinense	
Nighthawk, Eastern	
Nuthatch, Northern White-breasted	
Red-breasted	
Nuttallornis mesoleucus	
Nycticorax nycticorax hoactli	
Nyroca affinis	
collaris	
valisineria	
TOTAL	
Ohio, Annotated check-list of birds recorded at Granville, Licking	County,
Ohio	
Ohio Phi Beta Kappa, History of Theta Chapter, 1911-1936	1
Oklahoma, Upper Carboniferous crinoids from Morrow subseries of	
Oklahoma, and Texas	209-314
Old-squaw	
Oporornis formosus	
philadelphia	
Oriole, Baltimore	
Orchard	
Osprey	
Otocoris alpestris alpestris	
alpestris practicola	
Otus asio naevius	193

INDEX

Oven-bird		200
Owl, Common Saw-whet		
Eastern Screech		193
Great Horned		193
Northern Barred		193
Oxyechus vociferus vociferus		191
Pandion haliaetus carolinensis		191
Paradelocrinus aequabilis Moore and Plummer		
dubius (Mather)	297,	314
Moore and Plummer		294
? simus Moore and Plummer	302,	314
Paraplasocrinus Moore and Plummer		306
Passer domesticus domesticus		200
Passerculus sandwichensis savanna		202
Passerella iliaca iliaca		203
Passerherbulus henslowi henslowi		202
Passerina cyanea		201
Penthestes carolinensis carolinensis		196
Perimestocrinus pumilis Moore and Plummer		
Moore and Plummer		281
teneris Moore and Plummer	284,	314
Petrochelidon albifrons albifrons		195
Pewee, Eastern Wood		194
Phasianus colchicus torquatus		191
Pheasant, Ring-necked		191
Philohela minor		191
Phoebe, Eastern		194
Physics, Application of physics to modern hydrographic surveying	164-	186
Pipilo erythrophthalmus erythrophthalmus		202
Pipit, American		197
Piranga erythromelas		201
Pisobia melanota		192
minutilla		192
Plaxocrinus Moore and Plummer		277
strigosus Moore and Plummer		
Plover, Semipalmated		
Upland		191
Plummer, Frederick B., and Moore, Raymond C., Upper Carbo		
crinoids from Morrow subseries of Arkansas, Oklahoma, and Tex		
Podilymbus podiceps podiceps		188
Polioptila caerulea caerulea		197
Pooecetes gramineus gramineus		202
Porzana carolina		191
Poteriocrinitidae Bassler		236
Progne subis subis		195
Protonotaria citrea		198

INDEX	333

Querquedula discors		
Quiscalus quiscula aeneus	2	201
Redstart, American	9	200
Regulus satrapa satrapa		197
Rice, Charlotte, Early development: Child and ape		
Richmondena cardinalis cardinalis		
Riparia riparia riparia		195
Robin, Eastern		
100111, 13050011		
Sagenocrinoidea Wachsmuth and Springer		224
Sandpiper, Eastern Solitary		
Least		
Pectoral		
Semipalmated		
Spotted		
Sapsucker, Yellow-bellied		
Sayornis phoebe		
Sciadiocrinus? crassacanthus Moore and Plummer		
Moore and Plummer	2	275
? sp	2	277
Science and the college	1	133
—man's liberator	1	154
Scytalocrinus sansabensis Moore and Plummer	247, 3	314
Wachsmuth and Springer		
Secretary's report, Report of Permanent Secretary of the Denison Scient	ific	
Association for year 1936–1937		315
Seiurus aurocapillus		
motacilla		
noveboracensis notabilis		
Setophaga ruticilla		
Shoveller		
Shrike, Migrant		
Sialia sialis sialis		
Sitta canadensis		
carolinensis		
Smith, L. E., Brownian movement		
	1	191
Snipe, Wilson's		901
		100
Snipe, Wilson's	1	
Snipe, Wilson's Sono radio buoy Sora	1	91
Snipe, Wilson's Sono radio buoy Sora Sparrow, Bachman's	1	91 202
Snipe, Wilson's Sono radio buoy Sora Sparrow, Bachman's Eastern Chipping	1 1 2	191 202 202
Snipe, Wilson's Sono radio buoy Sora Sparrow, Bachman's Eastern Chipping Eastern Grasshopper	1 2 2	191 202 202 202
Snipe, Wilson's Sono radio buoy Sora Sparrow, Bachman's Eastern Chipping Eastern Grasshopper Eastern Savannah	1 2 2 2	91 202 202 202 202
Snipe, Wilson's Sono radio buoy Sora Sparrow, Bachman's Eastern Chipping Eastern Grasshopper Eastern Savannah Eastern Tree	1 2 2 2 2 2	191 202 202 202 202 202
Snipe, Wilson's Sono radio buoy Sora Sparrow, Bachman's Eastern Chipping Eastern Grasshopper Eastern Savannah Eastern Tree Eastern Vesper	1 2 2 2 2 2 2	191 202 202 202 202 202 202
Snipe, Wilson's Sono radio buoy Sora Sparrow, Bachman's Eastern Chipping Eastern Grasshopper Eastern Savannah Eastern Tree	1 2 2 2 2 2 2	191 202 202 202 202 202 202 200

INDEX

203
203
203
203
202
203
203
189
194
202
202
202
202
319
198
195
311
314
192
315
93
305
201
98
77
86
65
60
00
86
86
68
86
75
86
69
73
86
86
78
75
33
36
36
32
67
05
5
5

INDEX	335

Tree 195 Swift, Chimney 193
Citato, Calabianty
Tanager, Scarlet
Taylor, William J., and Klepfer, Ward M., Annotated check-list of birds recorded at Granville, Licking County, Ohio
Teal, Blue-winged
Green-winged
Tern, Black 192
Common 192
Texas, Upper Carboniferous crinoids from Morrow subseries of Arkansas,
Oklahoma, and Texas
Theta Chapter of Ohio Phi Beta Kappa, History, 1911-1936
Thrasher, Brown 197
Thrush, Eastern Hermit
Gray-cheeked
Olive-backed
Wood
Thryomanes bewicki bewicki
Thryothorus ludovicianus ludovicianus
Titmouse, Tufted
Totanus flavipes
melanoleucus 192
Towhee, Red-eyed
Toxostoma rufum
Tringa solitaria solitaria 192
Troglodytes aedon aedon
Tungsten, characteristics
drawn tungsten wire 79
filament incandescent lamp70-132
Turdus migratorius migratorius
Tyrannus tyrannus
Ulrichicrinus oklahomae Springer
Springer
Utharocrinus Moore and Plummer
pentanodus (Mather)
Veery
Vermivora chrysoptera. 198
peregrina 199
•
pinus
ruficapilla ruficapilla
Vireo, Blue-headed
Eastern Warbling
flavifrons
gilvus gilvus

Vireo, griseus griseus)(
olivaceus	
Philadelphia 19	
philadelphicus	
Red-eyed	
solitarius solitarius	
White-eyed	
Yellow-throated. 19	
Vulture, Turkey	
Warbler, Bay-breasted	9
Black and White	
Blackburnian	9
Black-poll	9
Black-throated Blue	9
Black-throated Green	9
Blue-winged	
Canada	
Cap May	
Cerulean	
Chestnut-sided 19	
Eastern Yellow 19	
Golden-winged 19	
Hooded	
Kentucky	
Magnolia	
Mourning	
Myrtle	
Nashville	
Northern Parula	
Palm	
Prothonotary	
Tennessee 190	
Wilson's 200	
Worm-eating	3
Water-thrush, Grinnell's 200	
Louisiana	
Waxwing, Cedar	7
Whip-poor-will, Eastern	3
Wickenden, William E., Science-Man's liberator 15	ŧ
Wiley, Forbes B., Experiment with freshmen in mathematical orientation 310	3
Wilsonia canadensis)
citrina)
pusilla pusilla	
Woodcock	i
Woodpecker, Eastern Hairy 196	1
Northern Downy	
Red-bellied	
Red-headed 19	

INDEX	337
Wren, Bewick's.	. 196
Carolina	
Eastern Winter	. 196
House	. 196
Xystocrinus? acicularis Moore and Plummer	. 272
Moore and Plummer	. 271
Yellow-legs, Greater	. 192
Lesser	
Yellow-throat, Northern	. 200
Zeacrinus girtyi Springer	. 268
Hall	
Zenaidura macroura carolinensis	. 192
Zonotrichia albicollis	. 203
leucophrys leucophrys	203